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OBJECTIVES: To evaluate health care costs following acute coronary syndromes (ACS) in patients with/without recurrent cardiovascular events (CVEs). **METHODS:** Patients with ≥1 ICD-9 CM codes for acute myocardial infarction (410.xx) or unstable angina (411.1x) during ACS hospitalization were identified from the HealthCore Integrated Research Database January 1, 2006 to September 30, 2011 (index event date defined as first ACS hospitalization date). Patients with <12 months pre/post-index plan eligibility or <18 years old were excluded. Recurrent CVEs were defined as myocardial infarction, non-fatal stroke or coronary heart disease-related mortality. Total and CV-related hospitalization costs following index ACS were evaluated in patients with/without recurrent CVEs, adjusting for demographic characteristics, comorbidities, treatment utilization and index ACS characteristics. **RESULTS:** Of 140,903 US patients, 22.0% had ≥1 subsequent CVE during follow-up. Patients with versus without recurrent CVEs were older - and had more comorbidities. Mean (median) follow-up was 2.0 (1.6) and 1.9 (1.5) years in patients with and without recurrent CVEs, respectively. Mean (median) length of stay for index ACS hospitalization was longer in patients with versus without recurrent CVEs. Mean (median) 1-year post-index total and CV-related cost were higher in patients with versus without recurrence ($41,478 [$17,474] and $34,094 [$10,057] versus $30,608 [$17,241] and $23,613 [$10,336]; p<0.001). Inpatient hospitalization costs were the major driver of total expenditures, comprising 76% and 72% of total costs in patients with versus without recurrence, respectively. Mean 2- and 3-year post-index total and CV-related costs were also significantly higher in patients with recurrent CVEs (2-year: $27,746 and $20,572 vs. $18,707 and $12,794; 3-year: $21,880 and $15,260 vs. $14,438 and $9,049; p<0.001). **CONCLUSIONS:** Following ACS hospitalization, patients with recurrent CVEs incurred higher 1-, 2- and 3-year post-index event costs compared those without recurrence, underscoring the need to focus on the prevention of subsequent adverse CVEs following ACS to improve patient outcomes and reduce total health care cost.

PCV53

CLINICAL AND ECONOMIC BURDEN OF COMPLICATIONS ASSOCIATED WITH CORONARY ARTERY BYBASS GRAFT AND/OR VALVE SURGERY

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OBJECTIVES: An increasing proportion of coronary artery bypass grafting (CABG) surgery is performed with concomitant valve repair or replacement surgery, and complications related to these procedures can have significant impact on patients and health care systems. This study quantifies the incidence and clinical and economic burden of complications associated with CABG, valve and combined (CABG and valve) surgery in the US. **METHODS:** Premier Perspective database was used to identify patients having CABG and/or valve surgery between Jan 2008 to Dec 2011. The study complications were postoperative infection, septicemia, postoperative stroke, postoperative adult respiratory distress syndrome, new-onset hemodialysis, reoperation, respiratory complication, cardiac complication, and hemorrhage. Both surgeries and complications were identified by ICD-9 codes. This study investigated (1) overall incidence rate of any study complication, (2) differences in length of stay (LOS), and (3) total inpatient costs for patients with and without complications during index and readmission within 30 days across three procedures. For multivariate adjustments, Gamma-distributed generalized linear model (GLM) and Poisson-distributed GLM models were used. **RESULTS:** Of 100,601 patients who underwent CABG alone, 31,903 (31.7%) had any study complications during their index or readmitted stay. Patients with valve alone or combined surgery had higher incidence of complications: 38.2% and 47.3% (p<0.01 for both), respectively. Complications in CABG incurred additional average LOS of 4.8 days (p<0.01) and additional average hospital cost of $14,699 (p<0.01) over CABG patients not experiencing complications, while complications in valve alone and combined surgery incurred an additional 6.8 days, $23,464 and 6.7 days, $24,985 respectively. **CONCLUSIONS:** Results showed complications in CABG and/or valve surgery increase clinical and economic burden by 0.41 to 0.60 times in terms of additional LOS and hospital costs. The burden increases significantly when a patient has combined procedures. The results highlight the potential opportunity for cost reduction by preventing the complications associated with CABG and/or valve surgeries.

PCV54

HOW BIG IS THE DIFFERENCE BETWEEN MARGINAL COST VERSUS TOTAL COST ESTIMATES? THE CASE OF ISCHEMIC STROKE IN SOUTH CAROLINA (SC)

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OBJECTIVES: Cost of illness in ischemic stroke has historically been reported as direct total health care cost, not compared to an equally ill, non-stroke, control group. This methodology likely overestimates cost and may affect national burden of illness estimates and cost effectiveness comparisons. The magnitude of the over-estimation is not known. The objective of this study is to estimate the 1-year marginal cost of ischemic stroke in SC Medicare beneficiaries and examine the impact of total versus marginal cost reporting on overall US stroke cost estimates and on the distribution of expenditures of inpatient care and rehabilitation. **METHODS:** Cost of illness was estimated from a Medicare cost perspective for ischemic stroke in South Carolina. Stroke patients were matched 1:2 to non-stroke beneficiaries using nearest-neighbor propensity score matching. Standard Medicare analytic files for all beneficiaries in SC in 2004 and 2005 were summed for the year following their index ischemic stroke or to death. The total study sample size was 8928. **RESULTS:** The use of a marginal costing approach produced lower estimates than the average total costing method. The 2004 marginal costs of stroke were $26.9 million, while the average cost estimate was $81.3 million, a difference of $54.4 million. Average total cost includes expenditures for comorbid conditions which are common in patients with stroke. Cost of stroke for the US in 2012 would be overestimated by $4.89 billion if this difference is generalized to national estimates. Furthermore, the proportion of stroke costs attributable to rehabilitation services would change from 13.7% based on mean cost, to 29.3% using marginal estimates. **CONCLUSIONS:** Using a marginal costing approach to estimate health care costs for conditions common in patients with a high prevalence of comorbid conditions is essential for accurate estimation of burden of illness, as well as estimating in-hospital and follow-up cost distributions correctly.

PCV55

THE COST-OF-DISEASE OF THROMBOEMBOLIC AND HEMORRHAGIC COMPLICATIONS ASSOCIATED WITH ATRIAL FIBRILLATION AND ITS TREATMENT IN TURKEY: AN EXPERT PANEL APPROACH FOR ESTIMATION OF COSTS

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OBJECTIVES: To estimate the costs-of-disease and direct cost components of thromboembolic complications associated with AF and the side-effects related with anticoagulant treatment, in Turkish setting. **METHODS:** A panel consisting of experts on cardiology, hematology, pulmonology and neurology, held a meeting to discuss the disease management processes of stroke, SE, IC bleeding and EC bleeding. They reviewed the global and local literature and guidelines, and also they discussed the spectrum of local clinical practices that are performed frequently. All cost components, including medications, surgical treatment, hospitalization, out-patient follow-up procedures and rehabilitation services were reviewed. September 2012 local prices for medications and procedures were used as sources. Mid-2012 USD currency rate was used. **RESULTS:** The cost of SE was estimated as 431 USD/event (70% non-pharmacologic treatment cost). The cost of acute management of stroke was calculated as 2,517 USD, of which 76% was caused by hospital stay. The annual cost of follow-up of stroke patients was 799 USD/year. The source of almost half (48%) of the cost was non-pharmacologic treatment (namely neurologic rehabilitation). The cost of major EC bleeding was 1014 USD/event (48% hospital stay cost) and the cost of minor EC bleeding is 49 USD/event (~100% hospital stay cost). The cost of acute management of IC bleeding was calculated as 6166 USD/event (86% hospital stay cost). The annual cost of follow-up of patients with IC bleeding was 728 USD/year (52% non-pharmacologic treatment cost). **CONCLUSIONS:** The costs of thromboembolic complications in AF patients are quite high. The acute events of stroke or IC bleeding are quite costly, and additional costs continue to happen due to treatment of neurologic disabilities caused by the primary event. Therefore, the economic burden of these thromboembolic events might be well reduced, if the prevention of these events could be prevented in AF patients.

PCV56

COSTS OF ILLNESS FOR PATIENTS WITH VENOUS THROMBOEMBOLISM IN CHINA

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OBJECTIVES: Venous thromboembolism (VTE), a condition that includes deep vein thrombosis (DVT) and pulmonary embolism (PE) is associated with major morbidity and mortality and causes huge economic burden. The purpose of this study was to evaluate direct and indirect costs of patients with VTE in China, producing an average cost per patient per year. **METHODS:** A cost-of-illness analyses was performed. The economic data was collected from an observational retrospective study. We recruited 154 patients diagnosed with VTE in Beijing, Shanghai and Guangzhou between October 2012 and December2012. Patients or their carers completed a questionnaire about resource utilization and absenteeism from work in the past year by an interview. Direct medical costs included outpatient visit, hospitalization,, ambulatory, drug, diagnostic tests, and physiotherapy costs. Indirect costs were estimated using a human capital approach. All costs referred to 2011. **RESULTS:** Among 154 patients, DVT accounted for 85.7%,51.95% were female and the mean age was 61.5±12.4. 96.8% patients have at least one kind of health insurance. From the societal perspective, total costs per patient over 1 year amounted to Chinese Yuan (CNY) 21484 (median: CNY14039, IQR: CNY6714-CNY32036). The direct medical costs were CNY15899 accounting for 74% of the total. The informal care costs were CNY3623 accounting for 16.9% of the total. And the indirect costs were CNY1678 accounting for 7.8%. **CONCLUSIONS:** The economic burden of VTE in China is considerable. The primary burden on patients was due to the direct medical costs.

PCV57

THE ECONOMIC BURDEN OF ATRIAL FIBRILLATION -RELATED STROKE IN CHINA

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OBJECTIVES: Atrial fibrillation (AF) increases the risk of stroke 5-fold and may be responsible for larger and more disabling strokes than those without AF which increase the associated costs of care. The purpose of this study was to evaluate